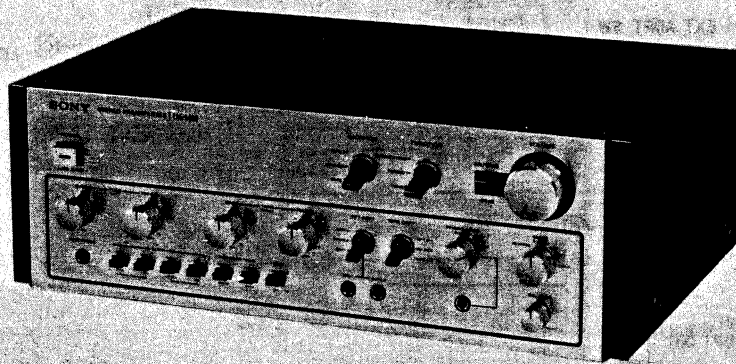


TAE-5450

AEP Model

628



STEREO PREAMPLIFIER

SPECIFICATIONS

Inputs:

	Sensitivity	Impedance	Maximum input capability (THD 0.1%)	S/N (weighting network, input level)
PHONO 1, 2	1.5 mV	50 k Ω	140 mV	70 dB (A, 1.5 mV)
TUNER AUX 1-3 TAPE 1, 2 EXT ADPT 1, 2	150 mV	50 k Ω	—	90 dB (A, 1.5 mV)

Outputs:

	Voltage	Impedance
REC OUT 1, 2	150 mV (max. 12 V)	1 k Ω
EXT ADPT 1, 2	150 mV (max. 12 V)	1 k Ω
HEADPHONE	0.3 V (8 Ω headphones) 3 V (10 k Ω headphones)	50 Ω
OUTPUT 1 2	1 V (max. 14 V)	1 k Ω 2 k Ω

Voltage amplification: (at 1 kHz)

Input \ Output	REC OUT 1, 2	EXT ADPT 1, 2	HEADPHONE	OUTPUT 1, 2
PHONO 1, 2	40 dB	40 dB	48 dB	58 dB
TUNER AUX 1-3 TAPE 1, 2 EXT ADPT 1, 2	0 dB	0 dB	8 dB	18 dB

Harmonic distortion: Less than 0.03 % at rated output

Intermodulation (IM) distortion: Less than 0.05 % at rated output
(60 Hz: 7 kHz = 4:1)

Frequency response: PHONO 1, 2 RIAA equalization curve ± 0.4 dB
TUNER
AUX 1-3
TAPE 1, 2
EXT ADPT 1, 2 } 10 Hz-100 kHz ± 0 dB -1 dB

Tone controls: BASS
 ± 10 dB at 50 Hz (TURNOVER 250 Hz)

± 10 dB at 100 Hz (TURNOVER 500 Hz)

TREBLE
 ± 10 dB at 10 kHz (TURNOVER 2.5 kHz)
 ± 10 dB at 20 kHz (TURNOVER 5 kHz)

Filters: LOW
12 dB/octave attenuation below 10 Hz or 40 Hz

HIGH
12 dB/octave attenuation above 9 kHz or 20 kHz

Residual noise: Less than 200 μ V, 70 μ V (at frequencies below 20 Hz)
(with VOLUME set to minimum, TONE canceled, FILTERS off)

GENERAL

Power requirements: 110, 127, 220 or 240 V ac adjustable, 50/60 Hz
100, 120, 220 or 240 V ac adjustable, 50/60 Hz

Power consumption: 9 watts

AC outlets: 2 switched 300 watts, 1 unswitched 200 watts

Dimensions: Approx. 460(w) x 168(h) x 323(d) mm
18 $\frac{1}{8}$ (w) x 6 $\frac{5}{8}$ (h) x 12 $\frac{3}{4}$ (d) inches
Including projecting parts and controls

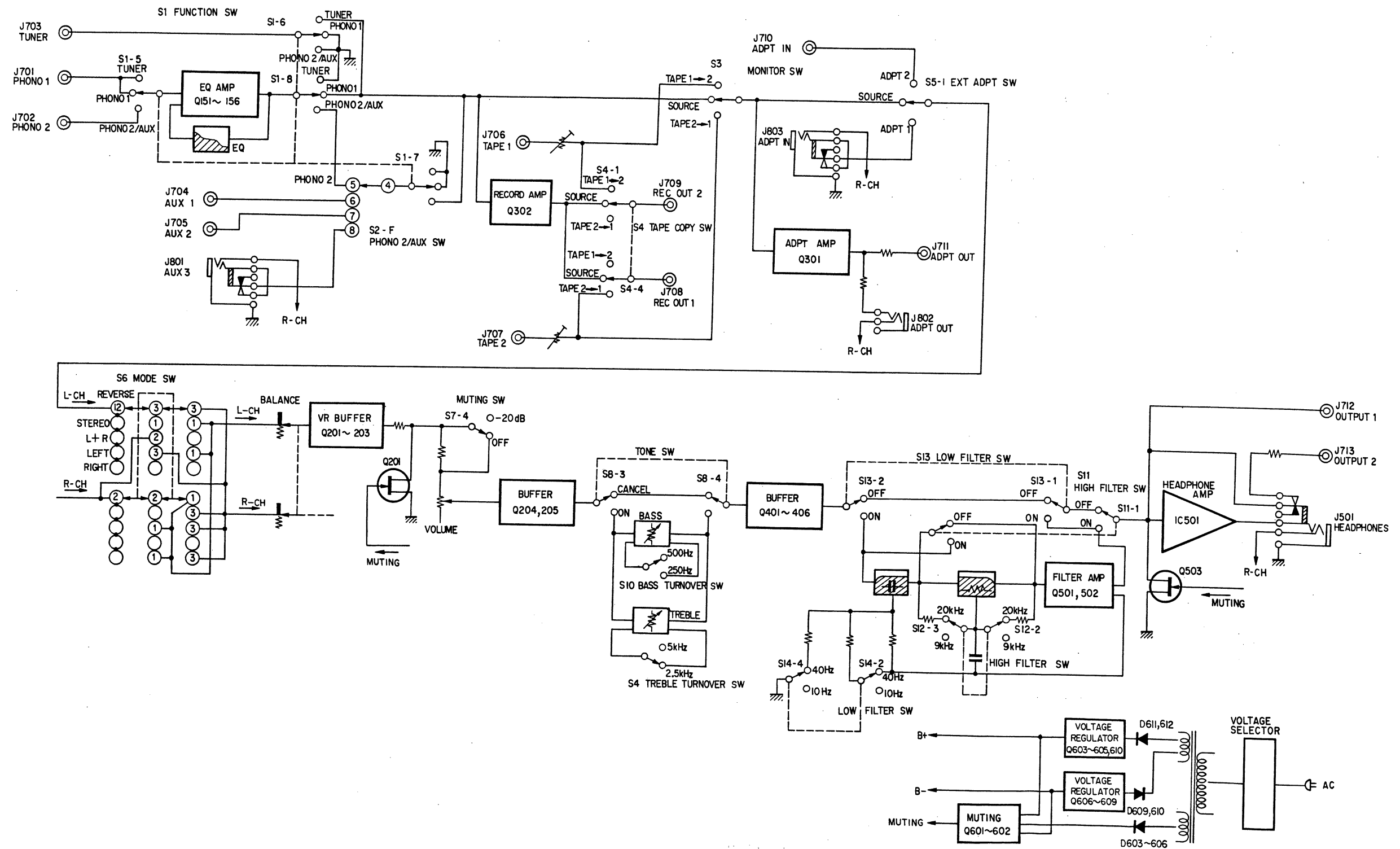
Weight: Approx. 9.2 kg (20 lb 5 oz) in net
11.6 kg (25 lb 9 oz) with shipping carton

SONY®

SERVICE MANUAL

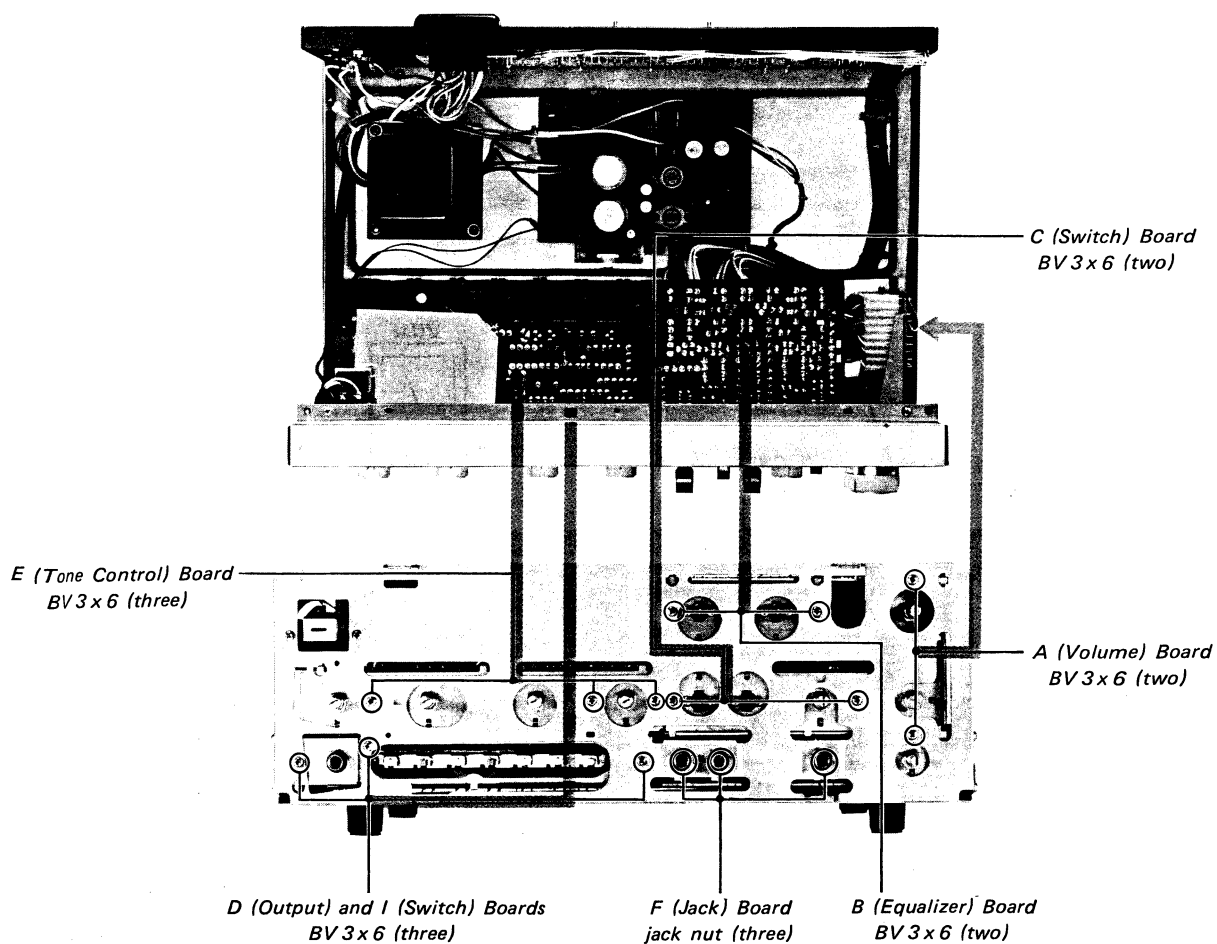
621 628

1. BLOCK DIAGRAM



1-2. CIRCUIT BOARD REMOVAL

1. Remove four screws (B 4 x 22, black) from both wooden side panels, and remove the side panels and top cover.
2. Remove the respective screws from the front subchassis and remove board(s).

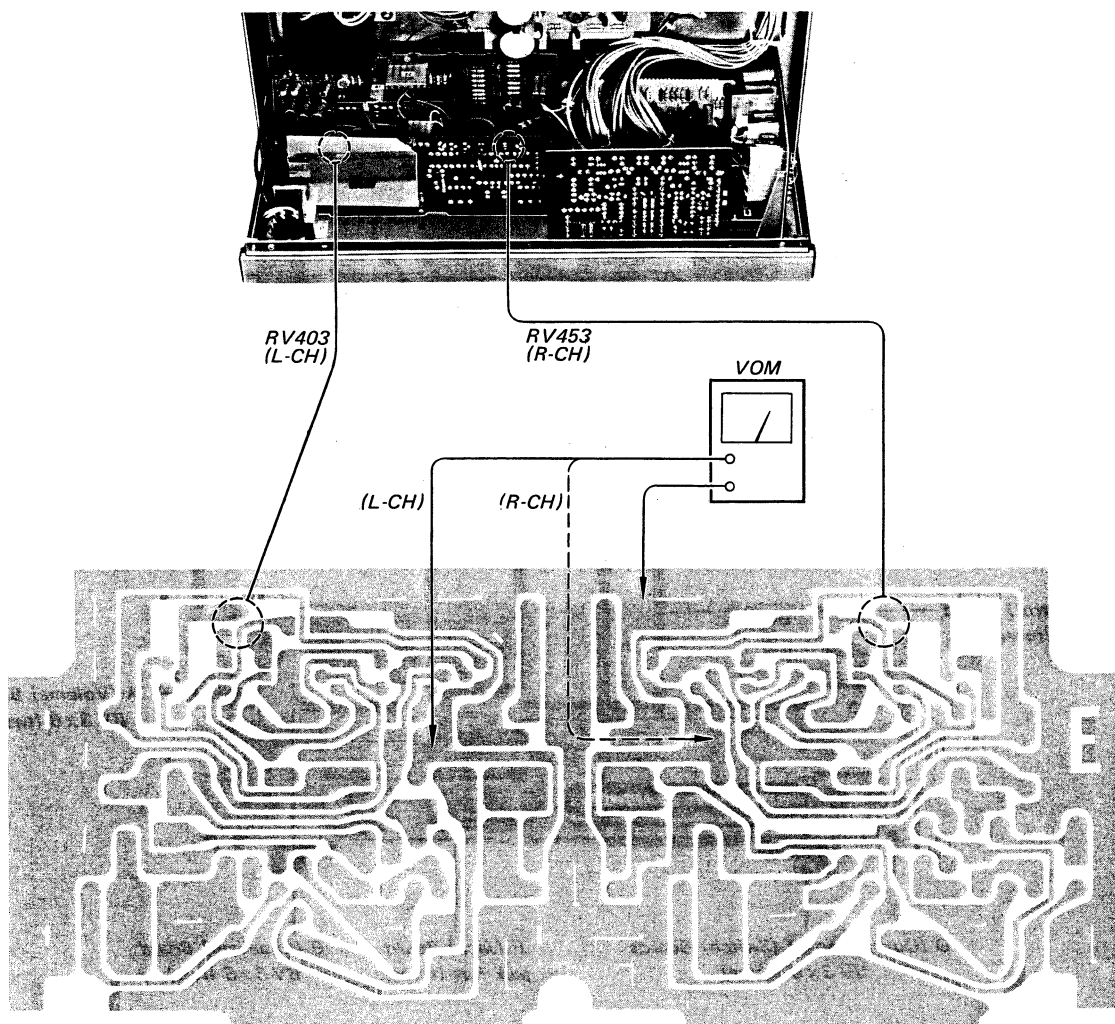


SECTION 2 ADJUSTMENTS

BALANCE ADJUSTMENT

Procedure:

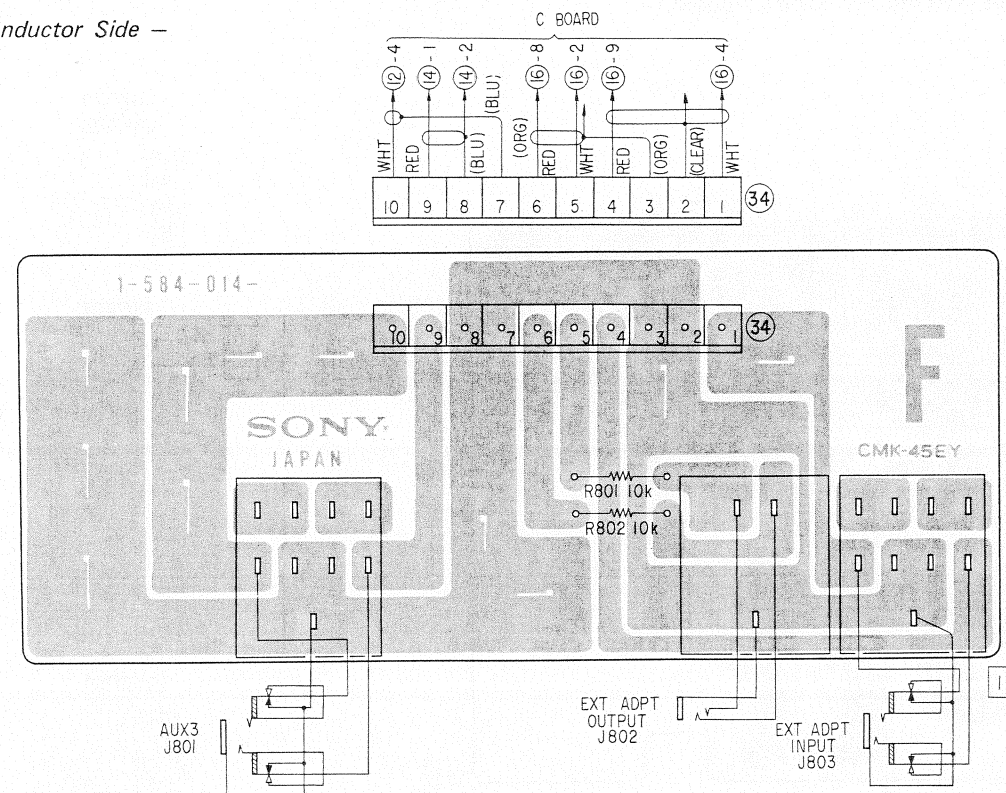
With no input signal, adjust RV403 (L-CH) and RV453 (R-CH) so that the source voltage of Q405 (L-CH) and Q455 (R-CH) becomes 0 V.



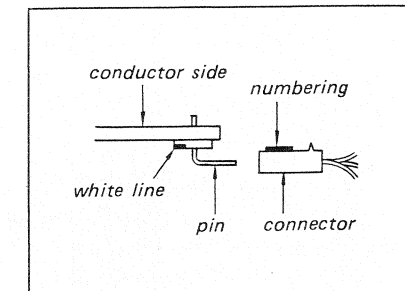
SECTION 3 DIAGRAMS

3-1. MOUNTING DIAGRAM — F (Jack) Board —

— Conductor Side —



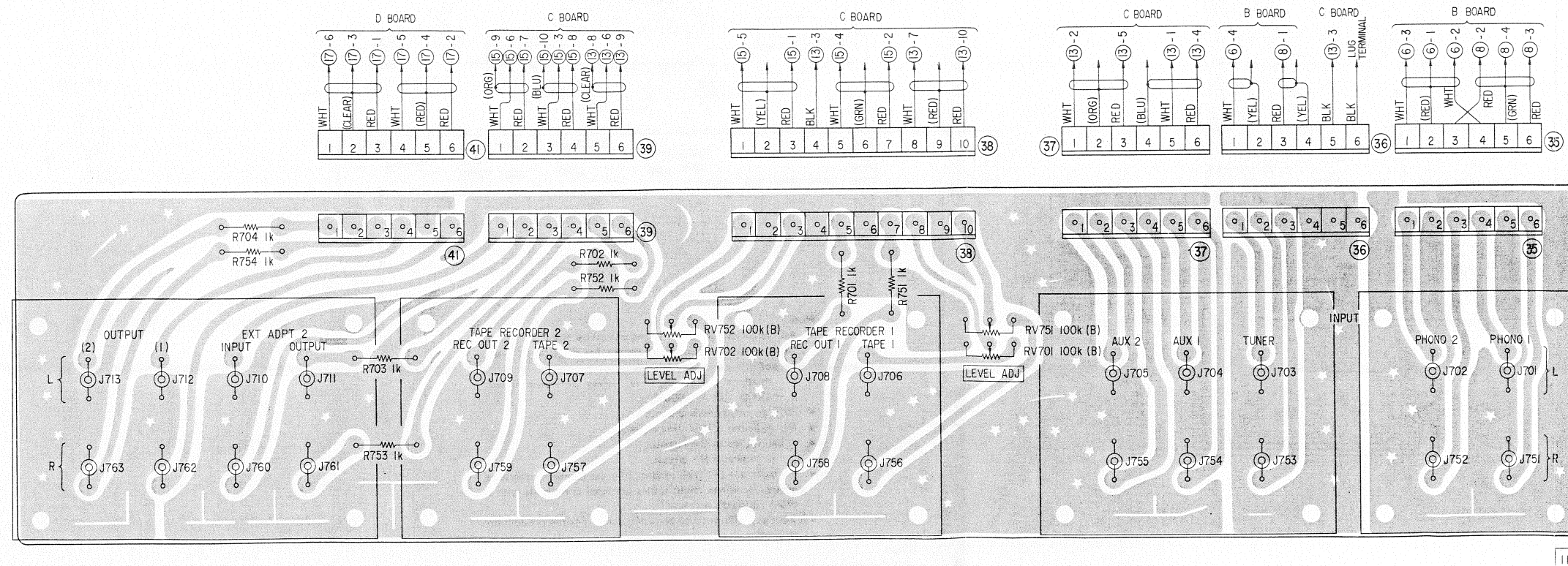
90°-bent Connector Base Post



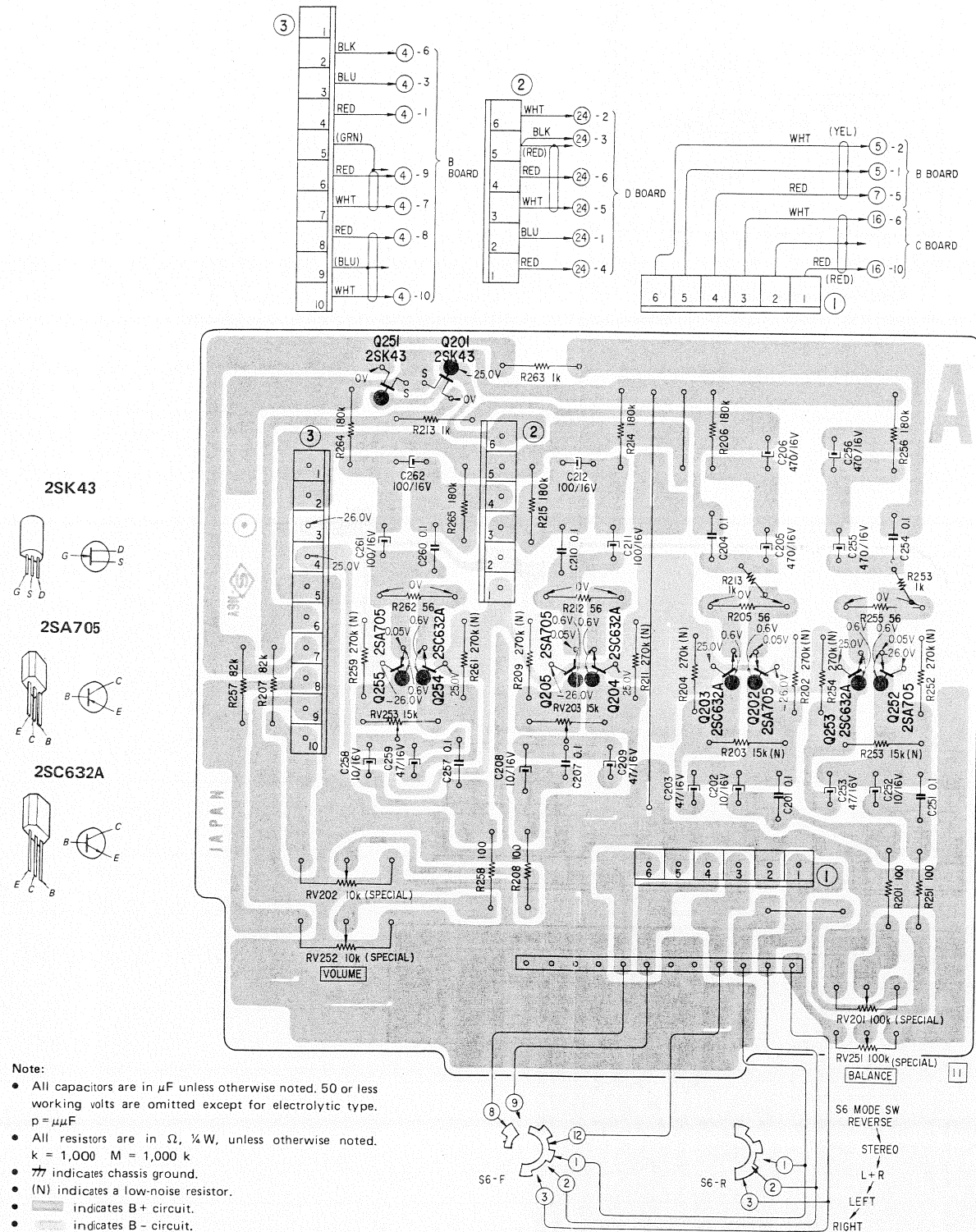
Note: All resistors are in Ω , $\frac{1}{4}$ W.

3-2. MOUNTING DIAGRAM — G (Jack) Board —

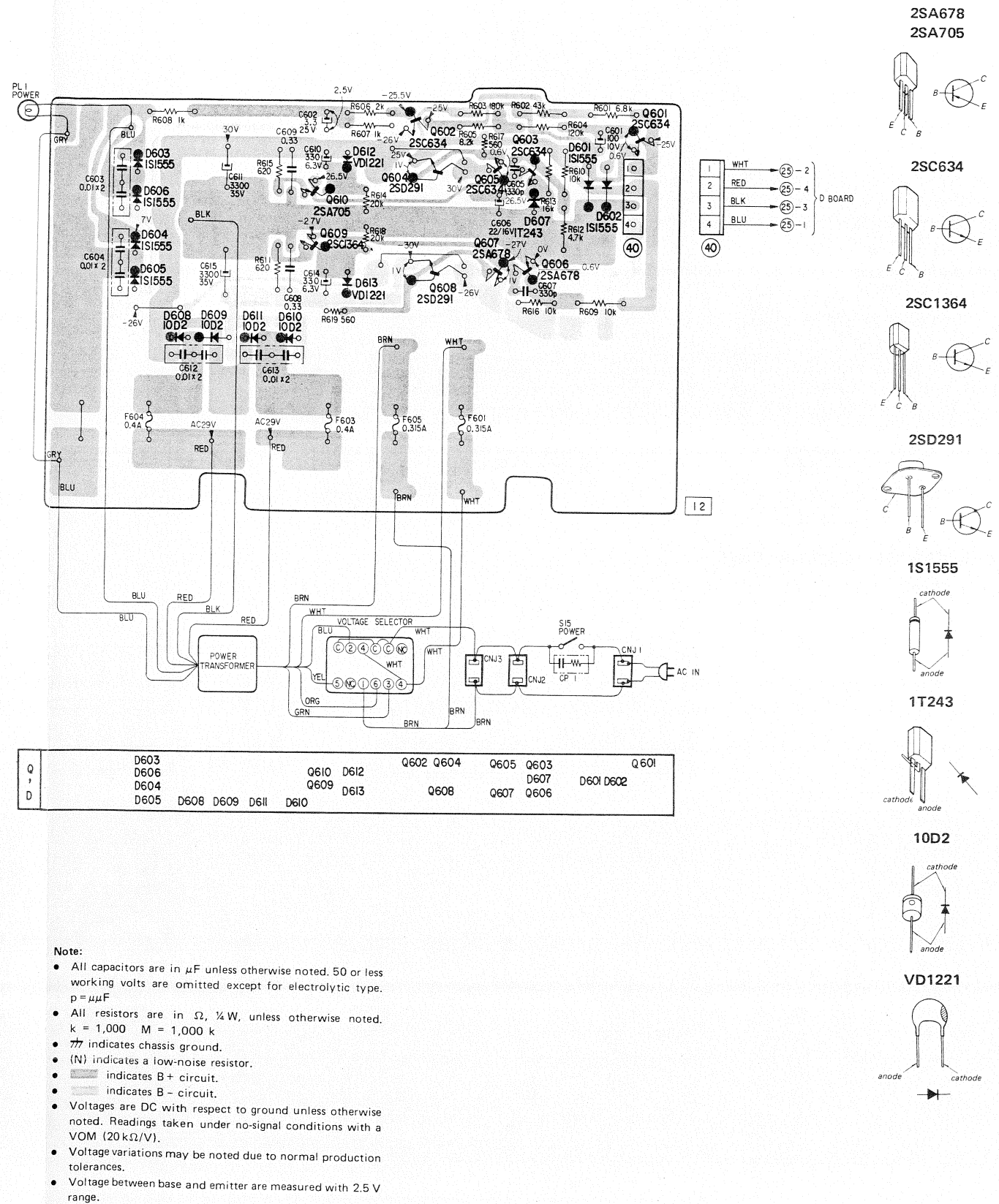
— Conductor Side —



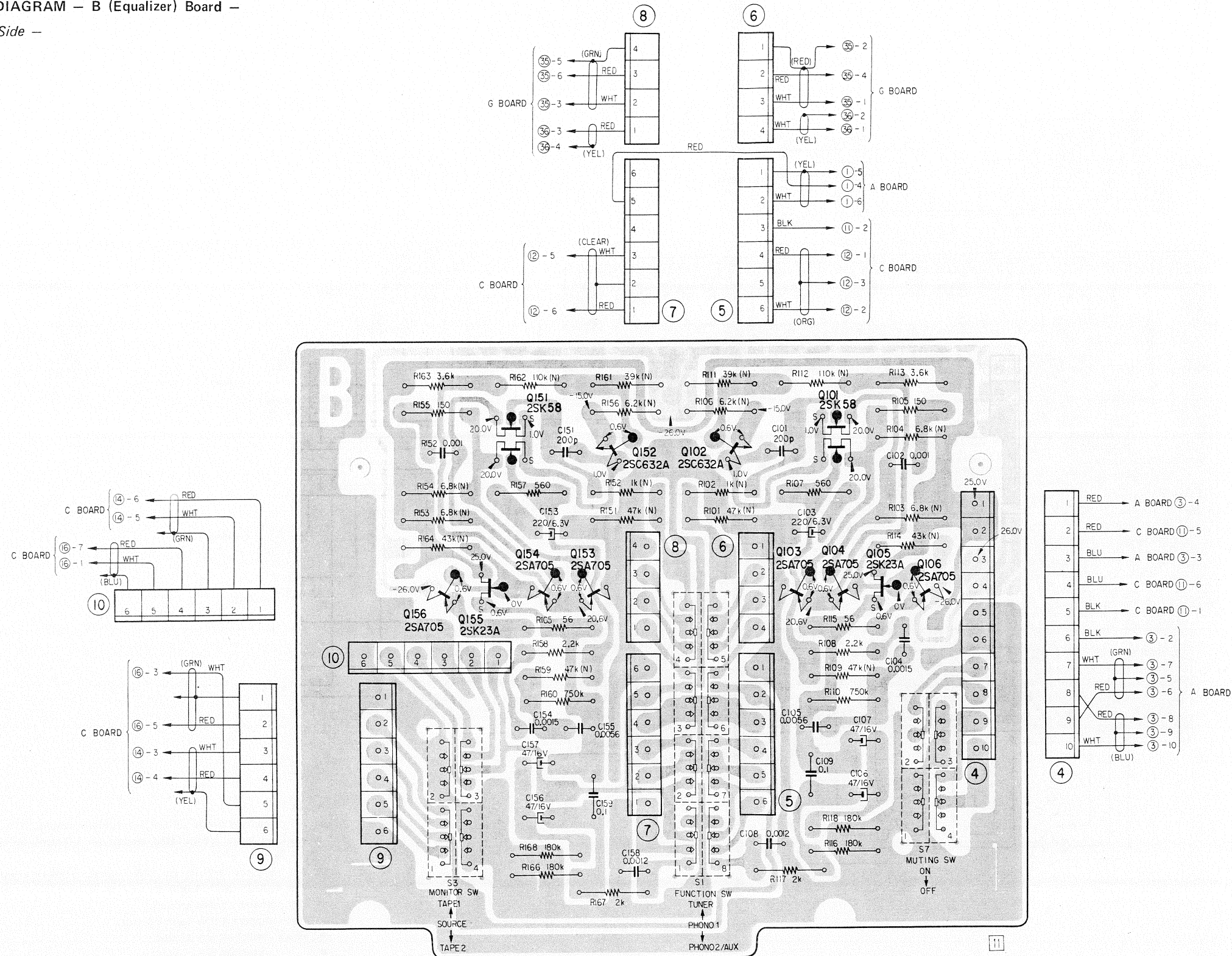
3-3. MOUNTING DIAGRAM — A (Volume) Board —
— Conductor Side —



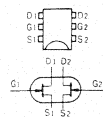
3-4. MOUNTING DIAGRAM — H (Power Supply) Board —
— Conductor Side —



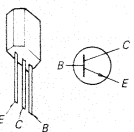
3-5. MOUNTING DIAGRAM — B (Equalizer) Board —
— Conductor Side —



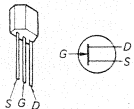
2SK58



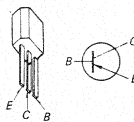
2SC632A



2SK23A



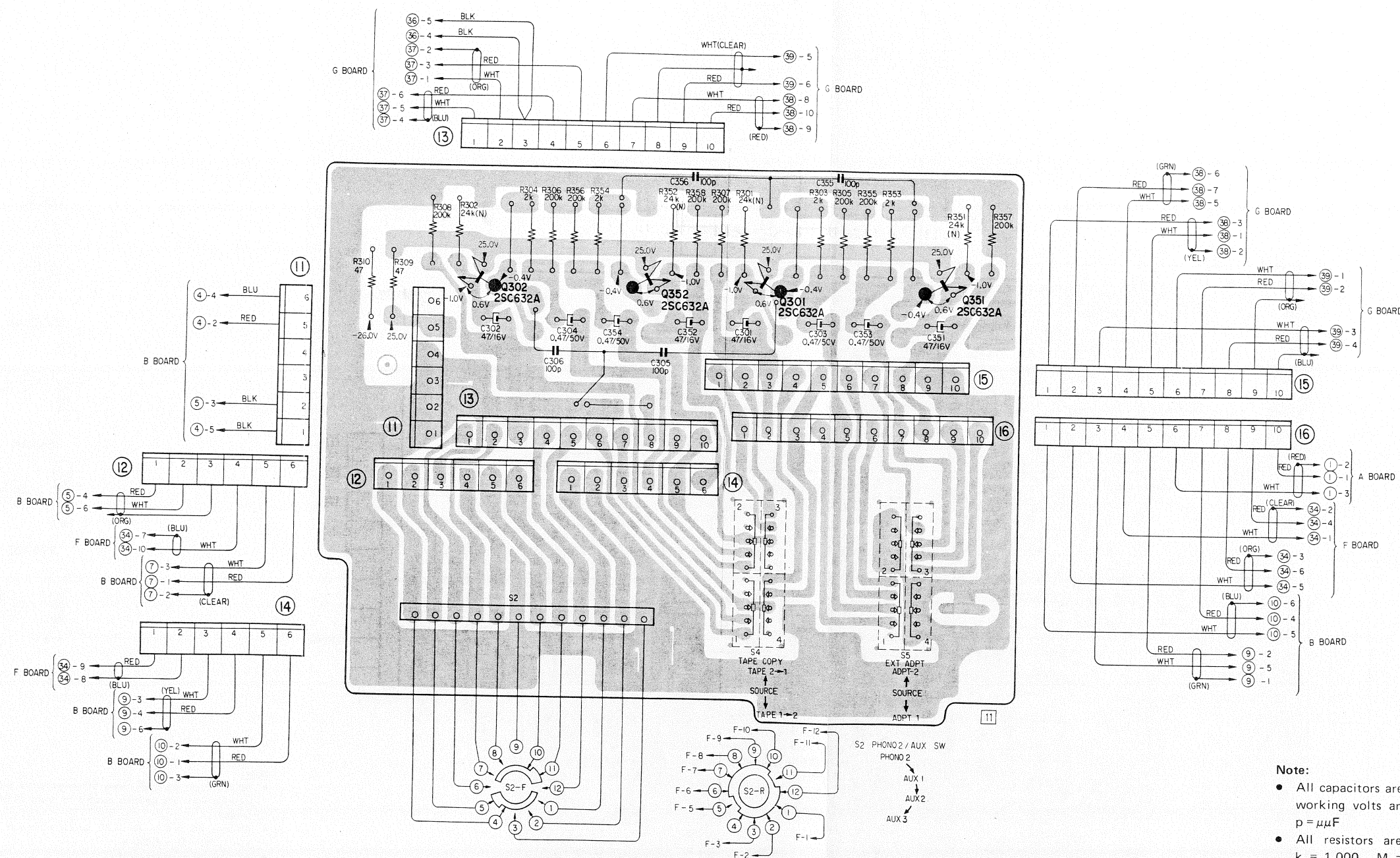
2SA705



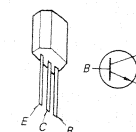
Note:

- All capacitors are in μF unless otherwise noted. 50 or less working volts are omitted except for electrolytic type. $\mu = \mu\text{F}$
- All resistors are in Ω , $\frac{1}{4}W$, unless otherwise noted. $k = 1,000$ $M = 1,000 k$
- /// indicates chassis ground.
- (N) indicates a low-noise resistor.
- B+ indicates B+ circuit.
- B- indicates B- circuit.
- Voltages are DC with respect to ground unless otherwise noted. Readings taken under no-signal conditions with a VOM (20k Ω/V).
- Voltage variations may be noted due to normal production tolerances.
- Voltage between base and emitter are measured with 2.5 V range.

3-6. MOUNTING DIAGRAM – C (Switch) Board –
– Conductor Side –



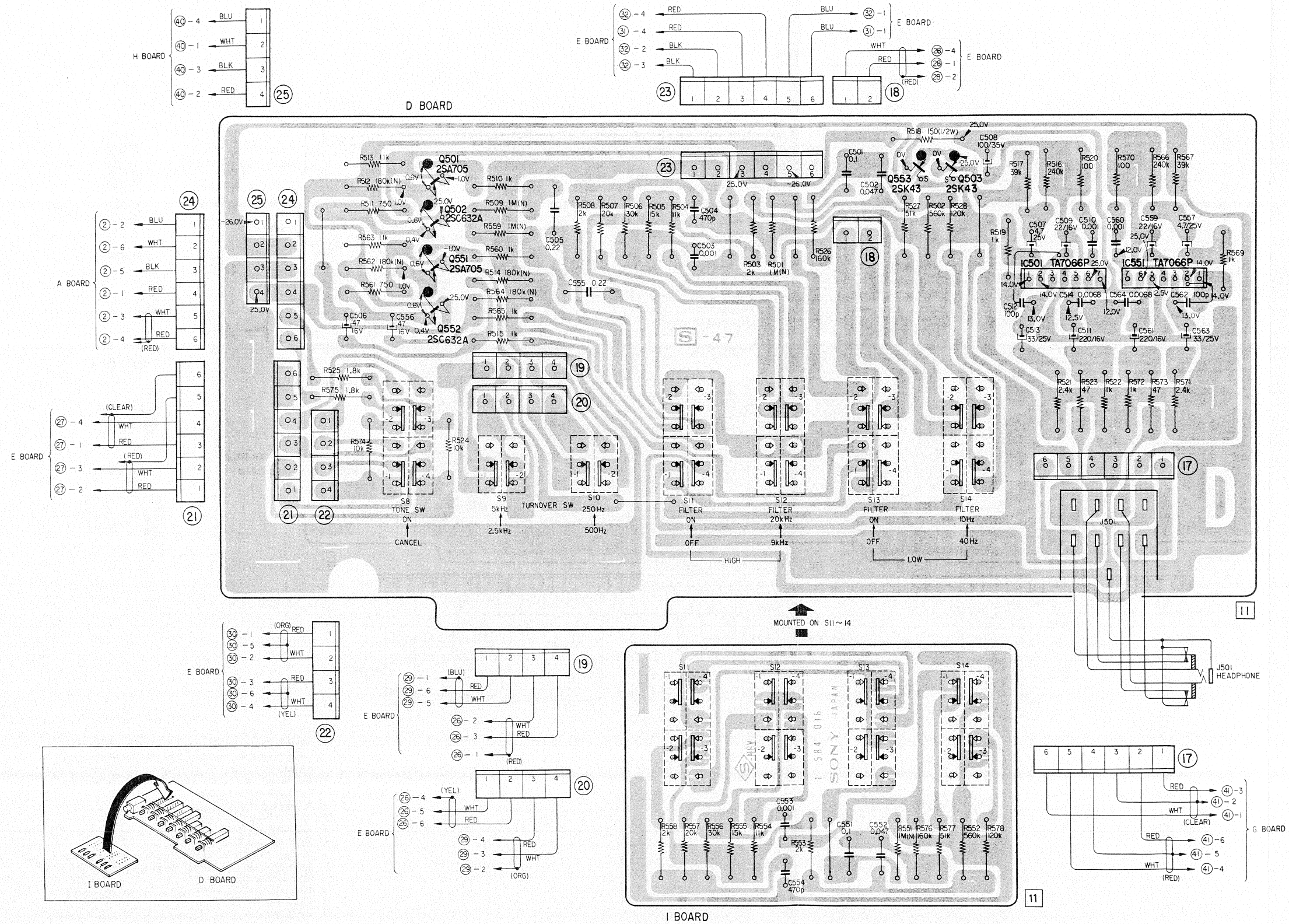
2SC632A



TAE-5450	TAE-5450
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3-7. MOUNTING DIAGRAM – D (Output) Board –

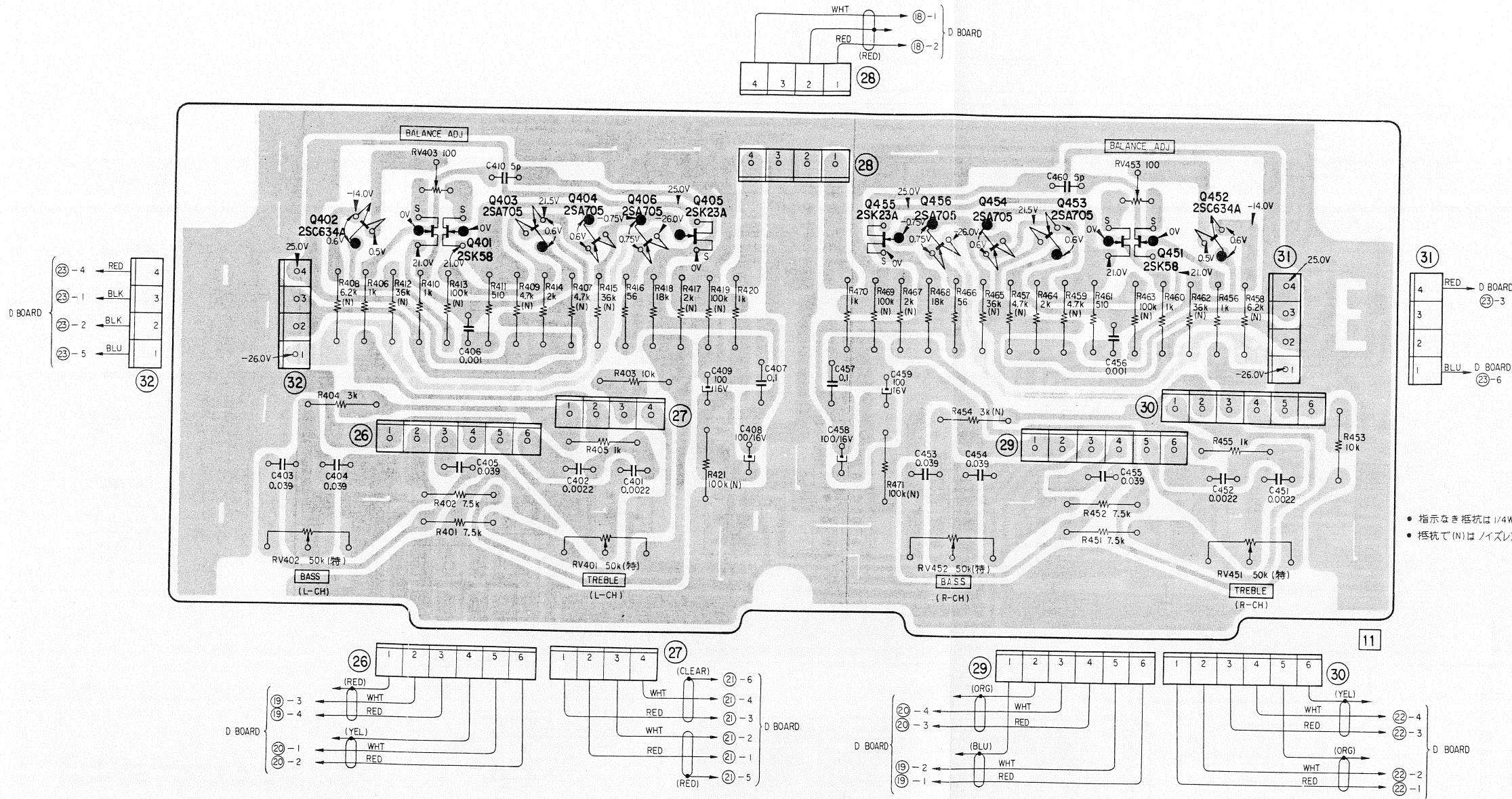
— Conductor Side —



Note:

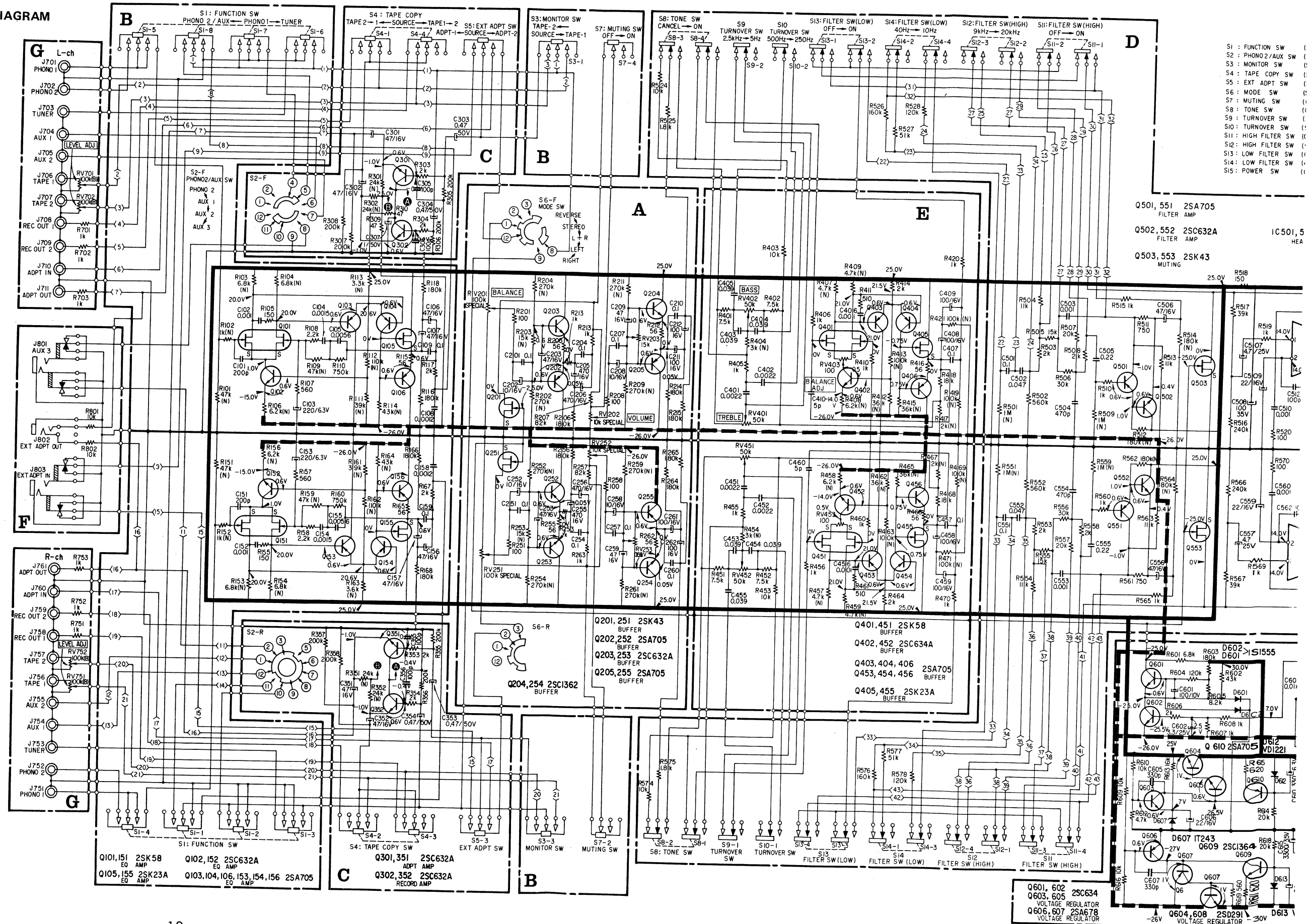
- All capacitors are in μF unless otherwise noted. 50 or less working volts are omitted except for electrolytic type.
 $p = \mu\text{F}$
- All resistors are in Ω , $\frac{1}{4}W$, unless otherwise noted.
 $k = 1,000$ $M = 1,000 k$
- $\overline{\text{---}}$ indicates chassis ground.
- (N) indicates a low-noise resistor.
- $\overline{\text{---}}$ indicates B + circuit.
- $\overline{\text{---}}$ indicates B - circuit.
- Voltages are DC with respect to ground unless otherwise noted. Readings taken under no-signal conditions with a VOM (20 $k\Omega/V$).
- Voltage variations may be noted due to normal production tolerances.
- Voltage between base and emitter are measured with 2.5 V range.

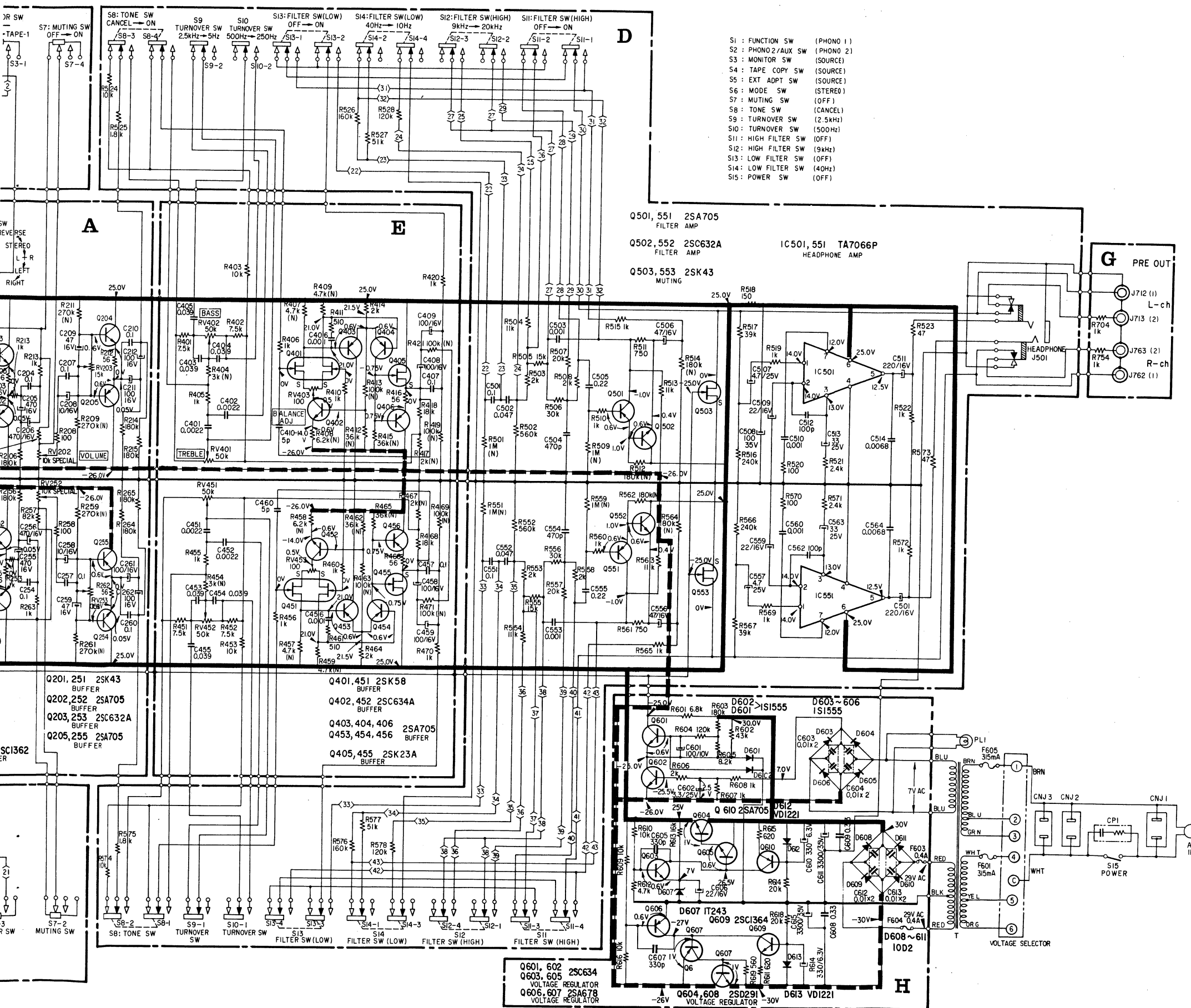
3-8. MOUNTING DIAGRAM — E (Tone Control) Board —



- Note:**
- All capacitors are in μF unless otherwise noted. 50 or less working volts are omitted except for electrolytic type.
 $p = 10^{-12}$
 - All resistors are in Ω , $\frac{1}{4} \text{ M}$, unless otherwise noted.
 $k = 1,000 \quad M = 1,000 k$
 - 77 indicates chassis ground.
 - (N) indicates a low-noise resistor.
 -  indicates B+ circuit.
 -  indicates B- circuit.
 - Voltages are DC with respect to ground unless otherwise noted. Readings taken under no-signal conditions with a VOM (20 $k\Omega/V$).
 - Voltage variations may be noted due to normal production tolerances.
 - Voltage between base and emitter are measured with 2.5 V range.

3-9. SCHEMATIC DIAGRAM





Note:

- All capacitors are in μF unless otherwise noted. 50 or less working volts are omitted except for electrolytic type. $\text{p} = \mu\text{F}$
- All resistors are in Ω , $\frac{1}{4}\text{W}$, unless otherwise noted. $\text{k} = 1,000$ $\text{M} = 1,000\text{k}$
- --- indicates chassis ground.
- (N) indicates a low-noise resistor.
- --- indicates B+ circuit.
- --- indicates B- circuit.
- Voltages are DC with respect to ground unless otherwise noted. Readings taken under no-signal conditions with a VOM (20k Ω /V).
- Voltage variations may be noted due to normal production tolerances.
- Voltage between base and emitter are measured with 2.5 V range.

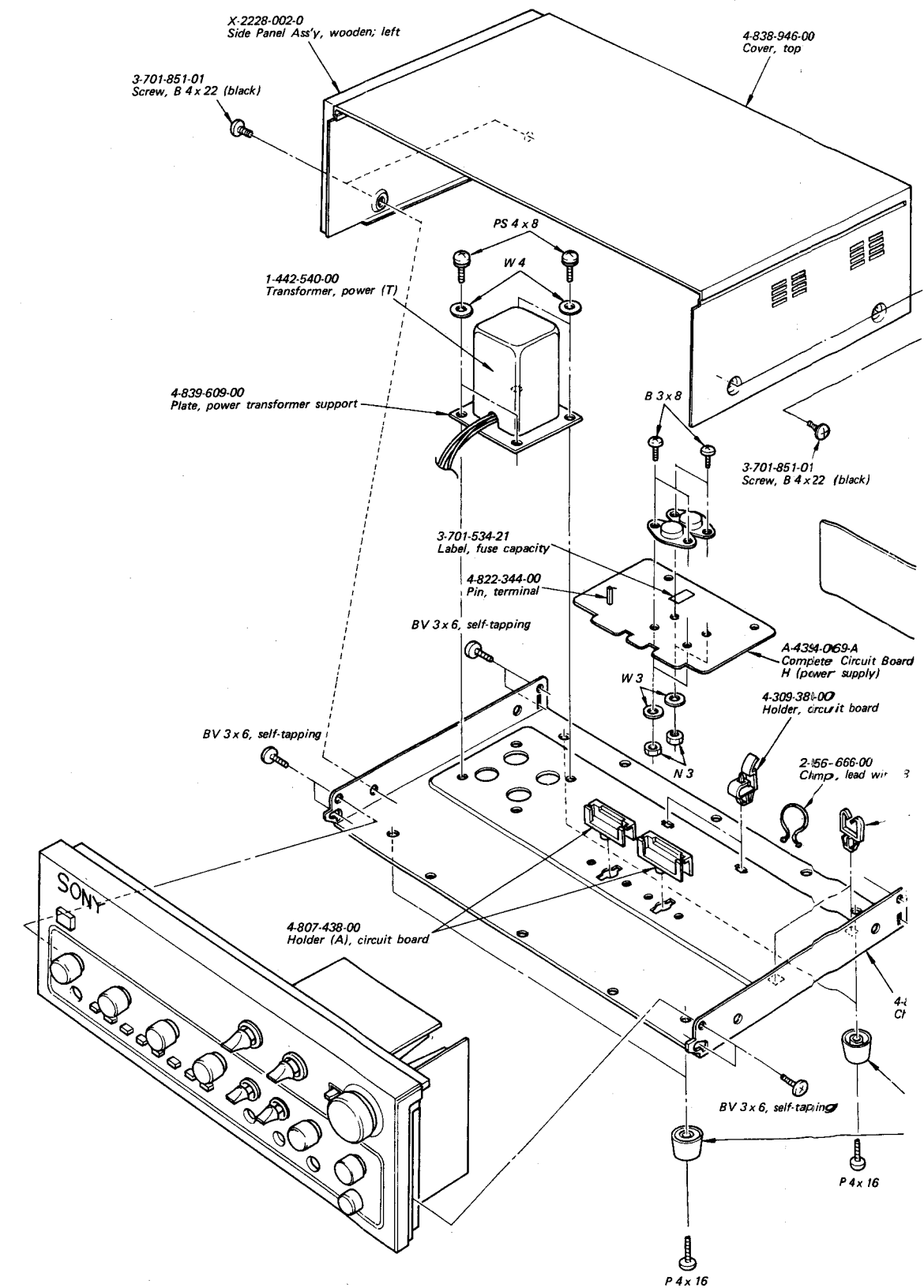
MEMO

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

SECTION 4

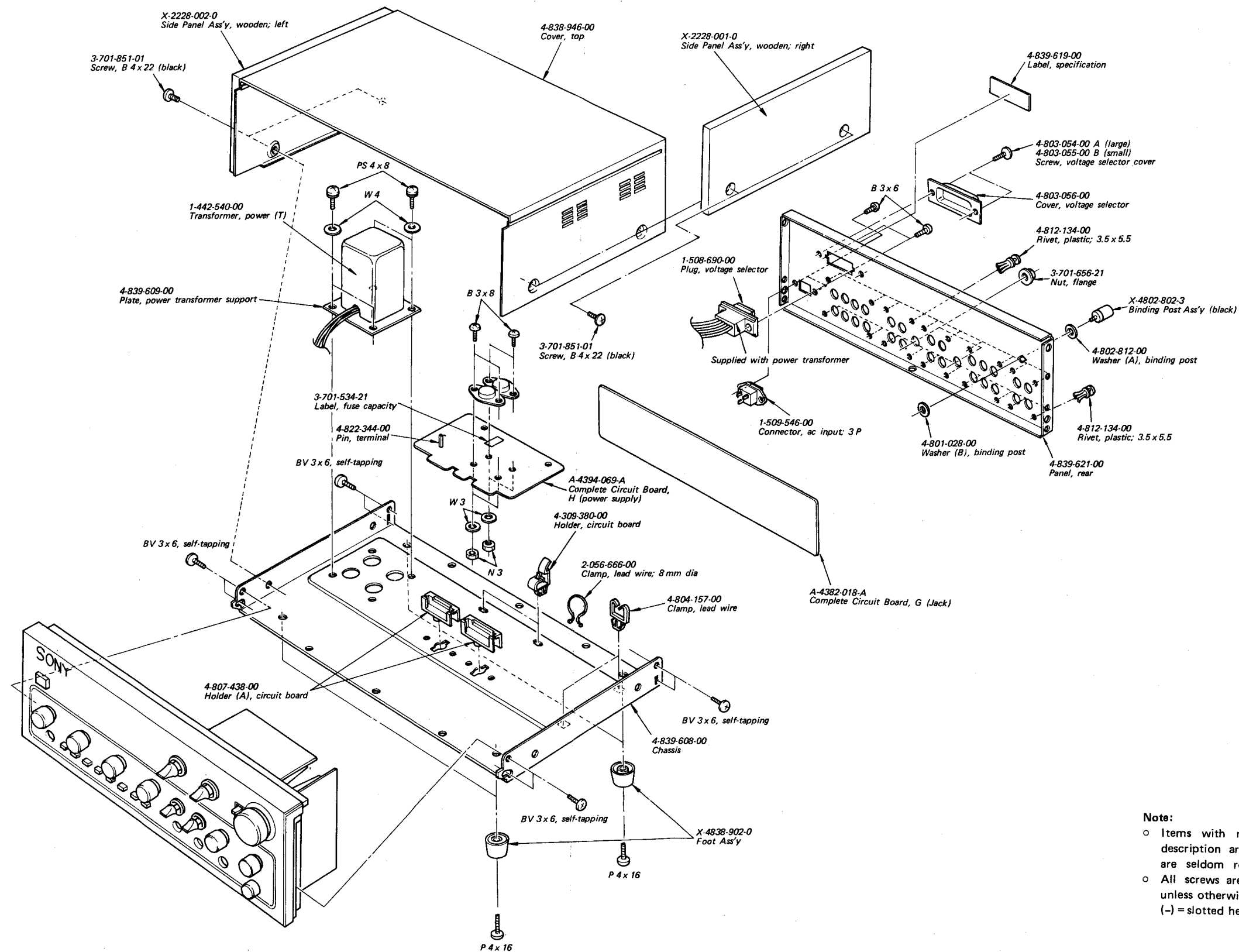
EXPLODED VIEWS

4-1. EXPLODED VIEW (1)



SECTION 4 EXPLODED VIEWS

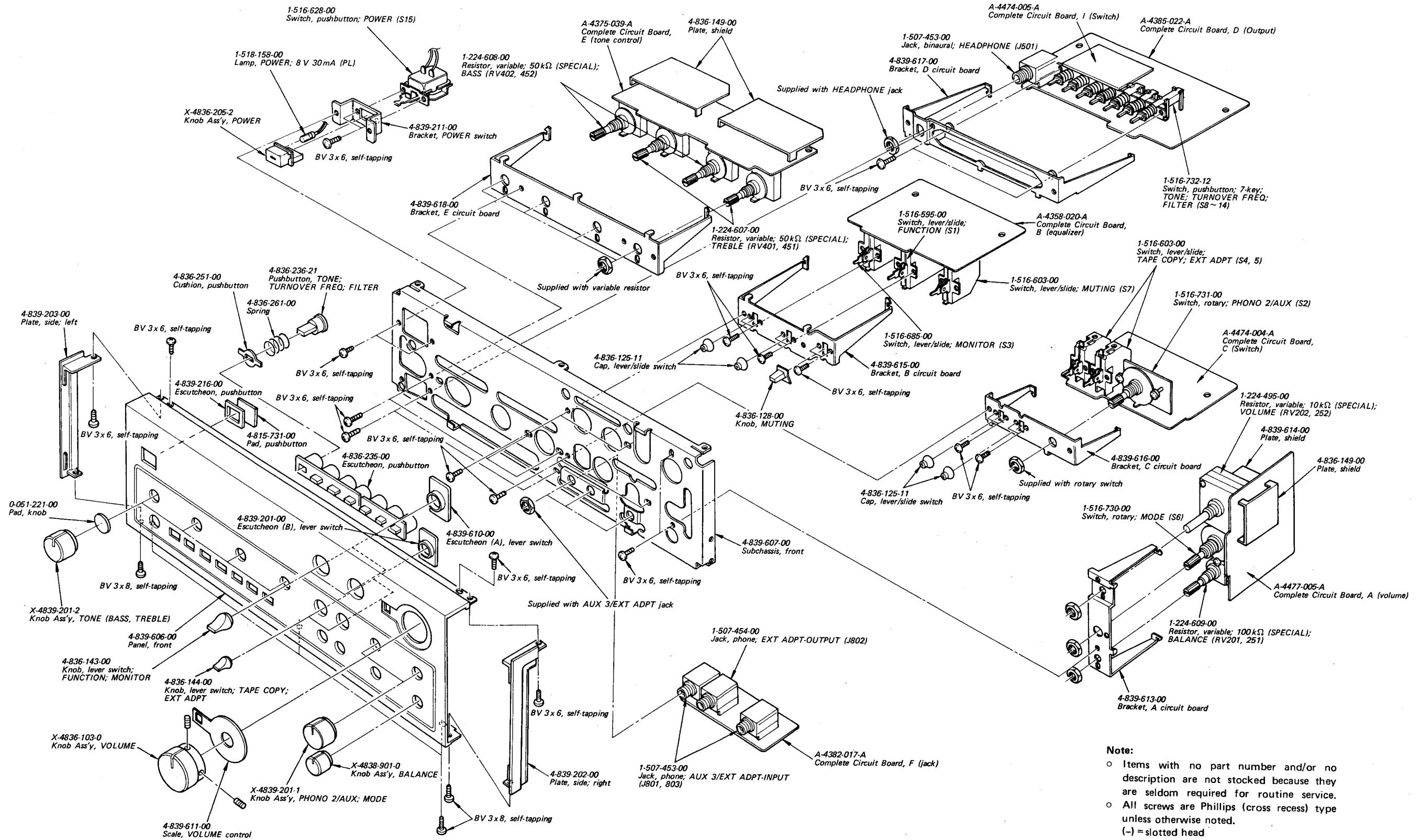
4-1. EXPLODED VIEW (1)



Note:

- Items with no part number and/or no description are not stocked because they are seldom required for routine service.
- All screws are Phillips (cross recess) type unless otherwise noted.
- (-) = slotted head

4-2. EXPLODED VIEW (2)



Note:

- Items with no part number and/or no description are not stocked because they are seldom required for routine service.
- All screws are Phillips (cross recess) type unless otherwise noted.
- (-) = slotted head

ELECTRICAL PARTS LIST

S1	1-516-699-00	Lever/Slide, FUNCTION
S2	1-516-731-00	Rotary, PHONO 2/AUX
S3	1-516-685-00	Lever/Slide, MONITOR
S4,5	1-516-603-00	Lever/Slide, TAPE COPY: EXT ADAPT
S6	1-516-730-00	Rotary, MODE
S7	1-516-603-00	Lever/Slide, MUTING
S8~14	1-516-732-12	Pushbutton, 7-key; TONE/ TURNOVER FREQ; FILTER
S15	1-516-628-00	Pushbutton, POWER

Ref. No. Part No. Description

FUSES

F601,605 1-532-235-00 315 mA
F603,604 1-532-066-00 0.4 A

JACKS

J501 1-507-453-00 Binaural; HEADPHONE

J701,702 }
J706~709 } 1-507-416-00 Phono, 4 p
J751,752 }
J756~759 }

J703~705 }
J753~755 } 1-507-386-00 Phono, 6 p

J710~713 }
J760~763 } 1-507-387-00 Phono, 8 p

J801,803 1-507-453-00 AUX 3/EXT ADPT-INPUT

J802 1-507-454-00 EXT ADPT-OUTPUT

Ref. No. Part No. Description

MISCELLANEOUS

CP1 1-101-534-00 Encapsulated Component
PL 1-518-158-00 Lamp, POWER 8 V 30 mA
T 1-442-540-00 Transformer, power
 1-508-690-00 Plug, voltage selector
 1-509-546-00 Connector, ac input; 3 p

CONNECTOR PINS

1-508-692-31 6 p
1-508-692-41 10 p
1-508-746-00 2 p
1-508-747-00 4 p
1-508-748-00 6 p

1-508-750-00 10 p

Part No. Description

ACCESSORIES

1-506-113-00 Plug, shorting
1-534-049-51 Cord, connection; RK-74H
1-534-514-13 Cord, connection; RK-81H
1-534-514-22 Cord, connection; RK-81H
3-780-567-21 Manual, instruction

SECTION 6
HARDWARE

HARDWARE

<u>Part No.</u>	<u>Description</u>
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Screws

All screws are Phillips (cross recess)
type unless otherwise noted.

7-682-165-01	P 4 × 16
7-682-547-05	B 3 × 6
7-682-548-01	B 3 × 8
7-682-661-01	PS 4 × 8
7-685-802-01	BV 3 × 6, self-tapping
7-685-546-05	BV 3 × 8, self-tapping

Washers

7-623-108-11	3
7-623-110-12	4

TAE-5450

Sony Corporation

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9-958-091-01

5H0628-1
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